

IN THE CLAIMS:

1. (Original) An etching method configured to make a through hole by etching an object from a surface thereof by dry etching, comprising:

the dry etching being conducted under the condition where a conductor with a higher electric conductivity than that of an entity is in contact with the entity at least in or near a location for making the through hole; and

wherein the through hole is made by setting the conductor with a high melting point on a wafer stage in a dry etching apparatus; maintaining the wafer stage at a temperature above the melting point of the conductor to melt the conductor and putting a wafer as the entity thereon; and hereunder conducting the dry etching of the wafer.

2. (Original) The etching method according to claim 1 wherein the entity to be etched is made of a semiconductor.

3. (Original) The etching method according to claim 1 wherein the entity to be etched is made of silicon.

4. (Canceled)

5. (Original) The etching method according to claim 1 wherein the conductor is a conductor film formed on the entire surface of the other surface of the entity to be etched.

6. (Original) The etching method according to claim 1 wherein the conductor is a conductor film formed on a location of the other surface of the entity near the region for making the through hole.

7. (Original) The etching method according to claim 1 wherein the conductor is a metal.

8. (Original) The etching method according to claim 1 wherein the through hole is made by setting the conductor with a melting point on a wafer stage in a dry etching apparatus; maintaining the wafer stage at a temperature above the melting point of the conductor to melt the conductor and putting a wafer as the entity thereon; fixing the wafer onto the wafer stage by lowering temperature of the wafer stage to a level lower than the melting point of the conductor, and thereafter conducting the dry etching of the wafer.

9. (Canceled)

10. (Original) The etching method according to claim 1 wherein the dry etching is conducted by using SF_6 gas and C_4F_8 gas.

11. (Original) The etching method according to claim 1 wherein the dry etching uses ions.

12. (Original) The etching method according to claim 1 wherein the dry etching is reactive ion etching.

13. (Original) The etching method according to claim 1 wherein the through hole has an aspect ratio not smaller than 3.

14. (Original) The etching method according to claim 1 wherein the through hole has an aspect ratio not smaller than 5.

15. (Original) The etching method according to claim 1 wherein the through hole has an aspect ratio not smaller than 8.

16. (Original) The etching method according to claim 1 wherein the through hole has an aspect ratio not smaller than 10.

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Canceled)

33. (Original) A manufacturing method of a structure including a step of making a through hole by etching an object to be etched from one of major surfaces thereof by dry etching, comprising:

the dry etching being conducted under the condition where a conductor with a higher electric conductivity than that of the entity is in contact with the entity at least in or near a location for making the through hole; and

wherein the through hole is made by setting the conductor with a high melting point on a wafer stage in a dry etching apparatus; maintaining the wafer stage at a temperature above the melting point of the conductor to melt the conductor and putting a wafer as the entity thereon; and hereunder conducting the dry etching of the wafer.

34. (Original) The manufacturing method of claim 33, wherein the dry etching is conducted by using SF_6 gas and C_4F_8 gas.

35. (Original) The manufacturing method of claim 33, wherein the dry etching uses ions.

36. (Original) The manufacturing method of claim 33, wherein the dry etching is reactive ion etching.

37. (Original) The manufacturing method of claim 33, wherein the through hole has an aspect ratio not smaller than 3.

38. (Original) The manufacturing method of claim 33, wherein the through hole has an aspect ratio not smaller than 5.

39. (Original) The manufacturing method of claim 33, wherein the through hole has an aspect ratio not smaller than 8.

40. (Original) The manufacturing method of claim 33, wherein the through hole has an aspect ratio not smaller than 10.